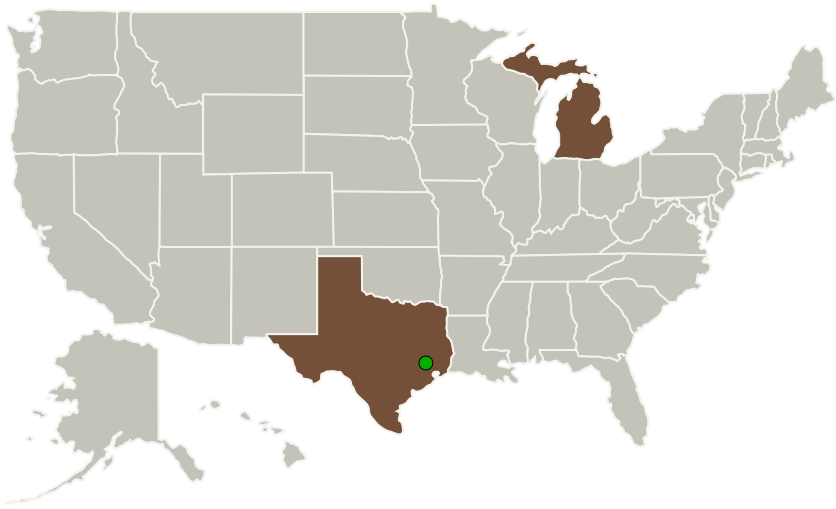
Automated Autonomy Assessment System, Phase I

Completed Technology Project (2010 - 2010)

Project Introduction

NASA has expressed the need to assess crew autonomy relative to performance and evaluate an optimal level of autonomy that maximizes individual and team performance. For this project, we propose to leverage our Automated Behavior and Cohesion Assessment Tools (ABCAT) system, which we designed for NASA for a recent project. The ABCAT system was designed in part to assess crew performance, which we will need for this project as well, and our approach will be to add autonomy modeling and assessment to the design. One of the key results of this Phase I project will be the identification of the most significant aspects of the environment and the behavior of the astronaut's engaged in space flight operations that can be used to identify their actual autonomy and performance level as they perform their tasks. The second will be the design of the data acquisition and processing components and framework that work together to observe and interpret those aspects and provide an assessment of the crew's exhibited level of autonomy and performance characteristics.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

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Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Completed Technology Project (2010 - 2010)

Primary U.S. Work Locations	
Michigan	Texas

Project Transitions

January 2010: Project Start

July 2010: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138833)*

Project Management

Program Director:

Jason L Kessler

Program Manager:

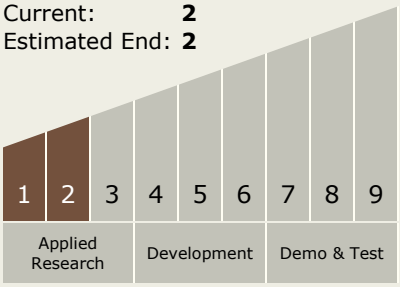
Carlos Torrez

Principal Investigator:

Marcus Huber

Technology Maturity (TRL)

Start: **1**
Current: **2**
Estimated End: **2**



Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.3 Behavioral Health and Performance

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Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System